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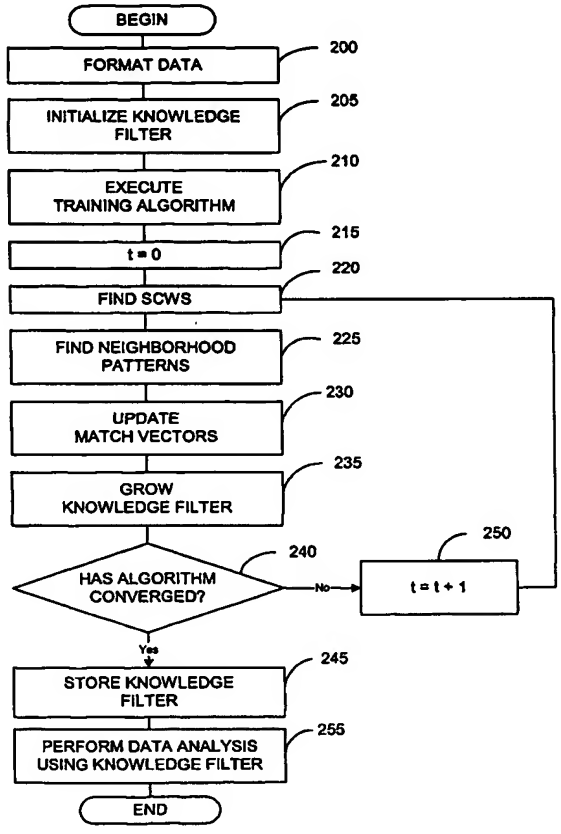
(54) Title: METHOD AND SYSTEM OF DATA ANALYSIS USING NEURAL NETWORKS



(57) Abstract: A system and method of computer data analysis using neural networks. In one embodiment of the invention, the system and method includes generating a data representation using a data set, the data set including a plurality of attributes, wherein generating the data representation includes: modifying the data set using a training algorithm, wherein the training algorithm includes growing the data set; and performing convergence testing, wherein convergence testing checks for convergence of the training algorithm, and wherein the modifying of the data set is repeated until convergence of the training algorithm occurs; and displaying one or more subsets of the data set using the data representation. In one embodiment, the data representation is a knowledge filter that includes a representation of an input data set. The representation may be constructed during a training process. In one exemplary embodiment, the training process uses unsupervised neural networks to create the data representation. In general terms, the data representation may include a number of coupled, or connected, hexagons called nodes. Considering relevant attributes, two nodes that are closer together may be more similar than two nodes that are further apart.

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